



Daikin UK training 2010/11

Tomorrow's technology today



Daikin UK's customised product training...

Designed to raise standards, set industry benchmarks and help you develop both product and service expertise. You'll receive the highest quality training and hands on instruction at our industry leading technology centres.



Latest range of products

The Woking technology centre is fully equipped with the latest range of products installed and fully operational for maximum hands on experience.

Courses are also available within our practically equipped regional centres in Glasgow, Birmingham and Bristol. The Manchester based centre is equipped to cater for a wide range of technical product training, with practical related content demonstrated through the use of purpose built simulation panels.

All training is given by highly skilled engineers who will be able to provide you with extensive in depth knowledge of our equipment. If you have any specific training requests outside of the scheduled programme, please contact us.

A general overview of the style of course content offered:

1. Installation and commissioning requirements
2. Advanced service and fault finding for field engineers
3. Product selection and application techniques
4. Daikin centralised control systems application and commissioning

Open weekdays 9am – 5.30pm

T: 0845 64 19 260

E: training@daikin.co.uk

F: 0845 64 19 075

www.daikin.co.uk/extranet

Daikin UK training centres

Birmingham

Daikin Airconditioning UK Limited
Unit 8, Holly Park, Spitfire Road,
Birmingham, West Midlands B24 9PB

Bristol

Daikin Airconditioning UK Limited
Maple House, Brotherswood Court,
Great Park Road, Almondsbury,
Bristol BS32 4QW

Glasgow

Daikin Airconditioning UK Limited
Unit 2, Glasgow Airport Business Park
Marchburn Drive, Paisley PA3 2SJ

Manchester

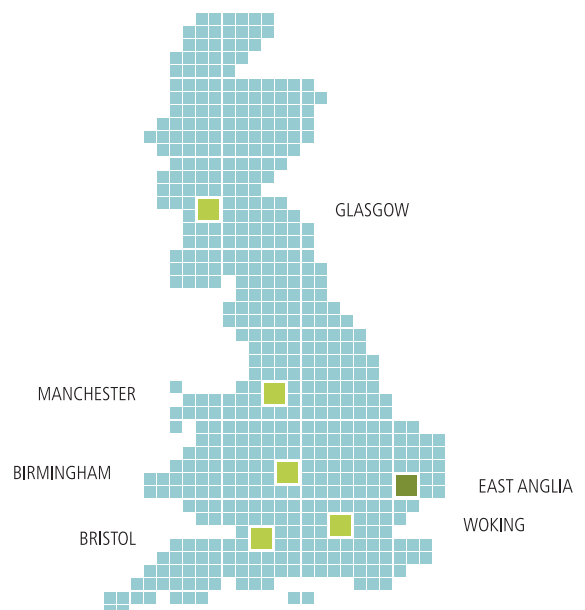
Daikin Airconditioning UK Limited
Quay Plaza, Unit G35, Salford Quays,
Manchester M50 3AG

Woking

Daikin Airconditioning UK Limited
1 River Court, Albert Drive, Woking,
Surrey GU21 5RP

East Anglia Training Venue

Courses specifically organised
for East Anglia based customers.
Further details available on request.





Evening courses now available

Due to popular demand some of our 1 day courses are now also available as 2 short evening sessions. Look for the clock symbol next to the course outlines.

Split and Multi Split systems
installation, commissioning and service

Reference: **DUK-SE1**

Refrigerant: **R410A**

Objectives

- Product introduction
- Install and commissioning requirements
- Service and maintenance

Who is it for

Installation, commissioning and service engineers with refrigeration and safe handling knowledge

Duration

1 day. Lunch included.

Morning 09.00-12.30 **Afternoon** 13.15-16.30

Available locations

Woking, Birmingham, Glasgow

Trainer

Daikin UK Technical engineer

Programme

- Product introduction
- R22 legislation
- Installation of field piping
- Installation of field wiring
- Optional Pcb's and accessories
- Indoor and outdoor unit functions
- Remote control options
- Thermostatic control
- Internal piping schematics
- Indoor and outdoor Pcb explanation
- Compressors
- Component checks
- Advanced system functions
- Malfunction codes and diagnostics
- Questions and answers

Price

£150 (ex vat)

Including course syllabus and service manuals

Sky Air systems installation, commissioning and service Pair, Twin, Triple and Double Twin systems

Reference: **DUK-SE2**

Refrigerant: **R410A**

Objectives

- Product introduction
- Install and commissioning requirements
- Service and maintenance

Who is it for

Installation, commissioning and service engineers with refrigeration and safe handling knowledge

Duration

1 day. Lunch included.

Morning 09.00-12.30 **Afternoon** 13.15-16.30

Available locations

Woking, Birmingham, Glasgow

Trainer

Daikin UK Technical engineer

Programme

- Product introduction
- R22 legislation
- Installation of field piping
- Installation of field wiring
- Optional Pcb's and accessories
- Indoor and outdoor unit functions
- Remote control options
- Thermostatic control
- Internal piping schematics
- Indoor and outdoor Pcb explanation
- Compressors
- Component checks
- Advanced system functions
- Malfunction codes and diagnostics
- Questions and answers

Price

£150 (ex vat)

Including course syllabus and service manuals

VRV®III selection and application including VRV®III-Q R22 Replacement System

Reference: **DUK-SE3**

Refrigerant: **R410A**

Objectives

- Product introduction
- Selection and application for VRV® equipment
- Basic install requirements

Who is it for

Internal, external, sales, design, selection and application engineers

Duration

1 day. Lunch included.

Morning 09.00-12.30 **Afternoon** 13.15-16.30

Available locations

Woking, Birmingham, Manchester, Glasgow, Bristol

Trainer

Daikin UK Technical engineer

Programme

- Product introduction
- R22 legislation
- System benefits
- Connectable combinations
- Selection procedures
- Use of the VRV® Express programme
- Field pipe work application
- Field wiring requirements
- System control options
- BMS Lon and Bacnet interfaces
- Optional Pcb's and accessories
- Cooling and heating system change over
- Daikin Intelligent Manager system
- Questions and answers

Price

£150 (ex vat)

Including course syllabus and technical data manuals

VRV®III Air Cooled installation and commissioning including VRVIII®-Q R22 Replacement System

Reference: **DUK-SE5**

Refrigerant: **R410A**

Objectives

- Product introduction
- Install and commissioning requirements

Who is it for

Install and commissioning engineers with refrigeration and safe handling knowledge

Duration

2 days. Lunch included.

Morning 09.00-12.30 **Afternoon** 13.15-16.30

Available locations

Woking, Birmingham, Manchester, Glasgow,
Bristol, East Anglia

Trainer

Daikin UK Technical engineer

Programme

Day 1

- R22 legislation
- Product introduction
- System selection
- Installation of field piping
- Installation of condensate drainage
- Installation of field wiring
- System control options

Day 2

- Commissioning requirements
- Optional accessories
- System changeover options
- Use of the remote controller
- Service codes and settings
- VRVIII®-Q installation and commissioning
- Questions and answers

Price

£300 (ex vat)

Including course syllabus and service manuals

Evening course now available



VRV®III advanced service and fault finding (DUK-SE5 must have been completed prior to attendance)

Reference: **DUK-SE6(E)**

Refrigerant: **R410A**

Objectives

- To cover advanced VRV® system operational functions, with service and fault finding techniques

Who is it for

Commissioning and service engineers with refrigeration and safe handling knowledge

Duration (2 options available at certain venues)

1 day. Lunch included.

Morning 09.00-12.30 **Afternoon** 13.15-16.30

or;

2 x short evening sessions. Snacks included.

Start 17.00 **Finish** 20.30

Available locations

Woking, Birmingham, Glasgow, Bristol

*Evening course only available at Woking and Bristol

Trainer

Daikin UK Technical engineer

Programme

- In depth look into the:
 - outdoor unit
 - BS Box
 - indoor unit
- Refrigerant flow explanations
- System capacity steps and control of starting sequences
- Test run operations and refrigerant containment check
- Indoor and outdoor field settings
- System component checks (indoor)
- System component checks (outdoor)
- Testing of inverter circuit
- Use of inverter analyser
- Additional service information
- Questions and answers

Price

1 day session: **£150 (ex vat)**

2 x short evening sessions: **£180 (ex vat)**

Including course syllabus (service manuals obtained on SE5)

'C' Series Intelligent Controller and Intelligent Manager

Reference: **DUK-SE7**

Objectives

- Install and commissioning of the Daikin ITC
- Introduction to the Intelligent Manager, Bacnet and Lon BMS Interface, devices

Who is it for

Controls and commissioning engineers

Duration

1 day. Lunch included.

Morning 09.00-12.30 **Afternoon** 13.15-16.30

Available locations

Woking, Birmingham, Manchester, Glasgow, Bristol

Trainer

Daikin UK Technical engineer

Programme

- Features of the I-Touch Controller
- Controller terminations
- Possible usage combinations
- Field wiring requirements
- Detailed functional explanation
- Configuring the programs
- System control options:
 - hardware
 - software
- Commissioning optional software
- Use of the preset tool
- Daikin Intelligent Manager system
- BMS control options:
 - Lon & Bacnet interfaces
- Questions and answers

Price

£150 (ex vat)

Including course syllabus and technical data manuals

Daikin Altherma: Low Temperature Split systems installation and commissioning including Monobloc

Reference: **DUK-SE11**

Refrigerant: **R410A**

Objectives

- Product introduction
- Installation requirements
- Commissioning procedures

Who is it for

Installation and commissioning engineers

Duration

2 days. Lunch included at all Daikin UK training centres (lunches available for an additional cost at all colleges).

Morning 09.00-12.30 **Afternoon** 13.15-16.30

Available locations

Woking, Birmingham, Manchester, Glasgow, Bristol, East Anglia, City of Bath College, Dudley College, College of North West London

Trainer

Daikin UK Technical Engineer,
or Regional College Technical Engineer

Programme

Day 1

- Product introduction
- R22 legislation
- Options and technical specifications
- Daikin Altherma selection software
- Air source heat pumps
- Mechanical installation
- Electrical installation

Day 2

- System water and refrigerant flows
- Prestart up checks and field settings
- Use of the remote control interface
- Advanced functional overview
- Recommended service and maintenance
- Fault finding
- Questions and answers

Price

£300 (ex vat)

Including course syllabus and technical data manuals



Evening course now available

Service Checker

(Previous attendance to DUK-SE6 is an advantage)

Reference: **DUK-SE12(E)**

Refrigerant: **R22, R407C & R410A**

Objectives

- Product introduction
- Install set up and commissioning requirements

Who is it for

Commissioning and service engineers

Duration (2 options available at certain venues)

1 day. Lunch included.

Morning 09.00-12.30 **Afternoon** 13.15-16.30

or;

2 x short evening sessions. Snacks included.

Start 17.00 **Finish** 20.30

Available locations

Woking, Birmingham, Glasgow, Bristol

*Evening course only available at Woking and Bristol

Trainer

Daikin UK Technical engineer

Programme

- Product Introduction
- Purpose of the service checker
- Equipment requirements, software and hardware
- Loading of the checker software
- Checker and system connection methods
- How to use the checker
- Playing back of previously recorded data
- Transferring of data
- Transferring data to CSV format
- Optional accessories
- Key operational and display items to look for
- Practical exercises

Price

1 day session: **£150 (ex vat)**

2 x short evening sessions: **£180 (ex vat)**

Including course syllabus and service manuals

Lt-VRV® Installation and Commissioning

Reference: **DUK-SE13**

Refrigerant: **R407C & R410A**

Objectives

- Product introduction
- Install and commissioning requirements
- Service and maintenance

Who is it for

Install and commissioning engineers with refrigeration and safe handling knowledge

Duration

2 days. Lunch included.

Morning 09.00-12.30 **Afternoon** 13.15-16.30

Available locations

Woking

Trainer

Daikin UK Technical engineer

Programme

Day 1

- Product introduction
- R22 legislation
- Basic system overview
- Installation of field piping
- Installation of condensate drainage
- Installation of field wiring
- Operational modes
- Refrigerant flow illustrations
- Commissioning requirements

Day 2

- Back up operation
- Outdoor unit fault finding
- Replacement of parts
- ST controller operation
- Introduction to the service checker

Price

£300 (ex vat)

Including course syllabus and technical data manuals

Daikin Altherma: Low and High Temperature Split systems selection and application including Monobloc

Reference: **DUK-SE15**

Refrigerant: **R410A & R134a**

Objectives

- Product introduction
- Selection and application of the Daikin Altherma range of equipment
- Basic install requirements

Who is it for

Internal, external sales design, selection and application engineers

Duration

1 day. Lunch included.

Morning 09.00-12.30 **Afternoon** 13.15-16.30

Available locations

Woking, Birmingham, Manchester, Glasgow, Bristol

Trainer

Daikin UK Technical engineer

Programme

- Product introduction and system benefits
- Air source heat pumps
- Introduction to heat loss calculations
- Selection procedure
- Selection software packages
- System operational parameters
- Cooling requirements
- Selection of hot water cylinder
- Daikin fan coils
- System control options
- Field pipe work application, refrigerant
- Field pipe work application, water
- Field wiring requirements
- Optional accessories including Solar connection
- Questions and answers

Price

£150 (ex vat)

Including course syllabus and technical data manuals

Evening course now available



Daikin Altherma: Low Temperature Split systems advanced service and fault finding including Monobloc

(DUK-SE11 must have been completed prior to attendance)

Reference: **DUK-SE17(E)**

Refrigerant: **R410A**

Objectives

- To cover advanced Daikin Altherma system operational functions, with advanced service and fault finding techniques

Who is it for

Service and maintenance engineers

Duration (2 options available at certain venues)

1 day. Lunch included.

Morning 09.00-12.30 **Afternoon** 13.15-16.30

or;

2 x short evening sessions. Snacks included.

Start 17.00 **Finish** 20.30

Available locations

Woking, Birmingham, Manchester, Glasgow, Bristol

*Evening course only available at Woking and Bristol

Trainer

Daikin UK Technical engineer

Programme

- Covering various product ranges
- Inside out of the Hydrobox
- Inside out of the Condensing Unit
- Inside out the Hot Water Cylinder
- Solar connections and control
- Internal pipe work. Ref and water
- Internal wiring detail
- Voltages to be expected
- Pressures to be expected
- Temperatures to be expected
- Advanced operational functions
- Operational components
- Correct and adverse effects of incorrect field settings
- Questions and answers

Price

1 day session: **£150 (ex vat)**

2 x short evening sessions: **£180 (ex vat)**

Including course syllabus and technical data manuals

Daikin Altherma: High Temperature Split systems installation and commissioning

Reference: **DUK-SE18**

Refrigerant: **R410A & R134a**

Objectives

- Product introduction
- Installation requirements
- Commissioning procedures

Who is it for

Installation and commissioning engineers

Duration

2 days. Lunch included.

Morning 09.00-12.30 **Afternoon** 13.15-16.30

Available locations

Woking, Birmingham, Glasgow, Bristol

Trainer

Daikin UK Technical engineer

Programme

Day 1

- Product introduction
- R22 legislation
- Options and technical specifications
- Daikin Altherma selection software
- Air source heat pumps
- Mechanical installation
- Electrical installation

Day 2

- System water and refrigerant flows
- Prestart up checks and field settings
- Use of the remote control interface
- Advanced functional overview
- Recommended service and maintenance
- Fault finding
- Questions and answers

Price

£300 (ex vat)

Including course syllabus and service manuals

VRVIII®-Q R22 Replacement System Installation and Commissioning

(DUK-SE5 must have been completed within the previous 12 months in order to attend)

Reference: **DUK-SE19**

Refrigerant: **R410A**

Objectives

- Product introduction
- Install and commissioning requirements

Who is it for

Install and commissioning engineers with refrigeration and safe handling knowledge

Duration

1 day. Lunch included.

Morning 09.00-12.30 **Afternoon** 13.15-16.30

Available locations

Woking, Birmingham, Glasgow, Bristol

Trainer

Daikin UK Technical engineer

Programme

- Product introduction and selection
- R22 legislation
- Installation of field piping
- Pipe sizing and unit selection
- Installation of field wiring
- Commissioning requirements
- System operation
- Component location and operation
- Internal pipe work diagrams and refrigerant flow
- Applicable field settings

Price

£150 (ex vat)

Including course syllabus and technical data manuals

To book a place on one of our customised product training courses, **photocopy and complete the Training request form on page 10.**

- Daikin UK Regional Training Centre – **1 Day course**
- Daikin UK Regional Training Centre – **2 Day course**
- Daikin UK affiliated Regional College – **2 Day course**
- East Anglia based Customer Training Venue – **2 Day course**
- Evening Course – **1 of 2 Evening sessions**

1 = Split & Multi
2 = Sky Air
3 = VRV® Selection
5 = VRV® Installation
6 = VRV® Advanced Service
7 = Intelligent Controller
12 = Service Checker
13 = Lt-VRV®
15 = Altherma Selection
17 = Altherma LT Advanced Service
18 = Altherma HT Installation
19 = VRV®III-Q Installation
*E = Evening course

Daikin UK training request form

To book a place on one of the customised product training courses, please photocopy and complete this form. For all course references starting DUK-SE, please complete one form per engineer, per course required.

For all course references starting C-DUK please contact your local college as listed on page 13.

Return your booking form/s to the Training Department:

Daikin Airconditioning UK Ltd, 1 River Court, Albert Drive, Woking, Surrey GU21 5RP.

Tel: 0845 64 19 260 Fax: 0845 64 19 075 Email: training@daikin.co.uk

Fully complete in capital letters, one application form per attendee, per course.

Incomplete forms will not be accepted.

DELEGATE NAME	POSITION / TITLE
COURSE REF.	COURSE DATE(S)
PREFERRED VENUE TO ATTEND	SPECIAL DIETARY REQUIREMENTS
COMPANY NAME	DAIKIN AIRCONDITIONING UK ACCOUNT NUMBER
FULL COMPANY ADDRESS	
	POSTCODE
TELEPHONE	FAX
EMAIL	

Cost per course: £150.00 per day per engineer (exc. VAT) or; **£180.00** per two evenings per engineer (exc. VAT)

Please tick as appropriate:

- ☐ Non D1 company. Please invoice
☐ D1 company
☐ D1+ company
☐ Service partner

(D1 Partners please refer to the criteria within the D1 manual)

*** All applications regardless of status selected must include a purchase order number.**

PURCHASE ORDER NUMBER

Failure to attend booked courses or cancellations less than 10 working days prior to course date, will result in your company being invoiced at full course cost. **Cancellations will only be accepted in writing.**

PRINT NAME IN FULL	POSITION / TITLE
SIGNATURE	DATE OF APPLICATION

We reserve the right to postpone or cancel any training course. Should this occur we will endeavour to accommodate your original request at the earliest opportunity.

City & Guilds and CITB/BRA college courses...

With Daikin UK's support, specialist further education colleges around the UK are offering high-class training with state-of-the-art equipment. Helping raise industry standards, for the highly skilled engineers who are in increasing demand.



Growth together

Daikin UK is committed to ensuring that the next generation of heating, air conditioning and ventilation engineers has the specialist skills and practical experience required to install and maintain the innovative new technologies that can improve the performance of HVAC-R systems while reducing their environmental impact.

In turn, this will help employers who invest in apprenticeships and ongoing training of their engineers to capitalise on the growing business opportunities for companies with proven expertise in delivering highly energy-efficient climate control systems.

Why invest in training on the latest systems:

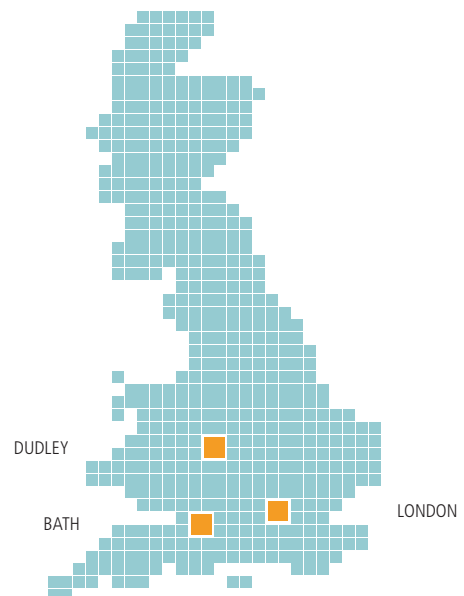
- The rapidly growing market in heat pumps and heat reclaim systems offers major new business opportunities
- New technologies require wider knowledge of heating, refrigeration and safe handling techniques
- Tighter regulations demand certified skills and renewal of existing certifications
- Specialist training programmes provide invaluable hands-on experience in the very latest technologies
- Market leading technology within a specialist training course provides the best grounding to develop your team's expertise.

College collaborations

So far, this on going initiative has created the following collaborations with Daikin UK:

City of Bath College (October 2007)
College of North West London (July 2008)
Dudley College (November 2009)

Each college offers carefully prepared training courses. For more information, please contact your local college directly (see page 13).



Commercial pipe work and brazing up to 7/8" pipe work

Reference: **C-DUK-01**

Duration: **1 day**

Attendees: **6-10 Engineers**

Who is it for

Those with proven practical experience, requiring theoretical and practical tuition on the industry related procedures required for the Fabrication of refrigerant copper pipe work.

Certification

CITB/BRA Commercial Brazing Standards

Example of contents

- Health and safety Issues
- Introduction to brazing
- Brazing equipment preparation
- Correct ignition procedures
- Practical brazing of pipe work

F Gas (category 1) City & Guilds 2079

Reference: **C-DUK-2.5**

Duration: **2.5 days**

Attendees: **6-10 Engineers**

Who is it for

Experienced Refrigeration and Air Conditioning Engineers requiring renewal of their existing C&G 2078 certificate. Theoretical and practical tuition will be received on the industry's latest requirements relating to the F Gas regulations.

Certification

City & Guilds 2079

Example of contents

- Understanding of environmental impact of F gas
- Identifying condition and state of refrigerant
- Attaching gauge manifold to a split system running, pump down and removal
- Leak testing
- Monitoring system performance for indication of refrigerant charge & possible shortage
- Equipment record keeping requirements

Refrigerant safe handling, CITB commercial pipe work brazing and split air conditioner installation practices

Reference: **C-DUK-03**

Duration: **3 days**

Attendees: **6-10 Engineers**

Who is it for

Heating engineers as a first stage introduction to the Refrigeration and Air conditioning Installation and operational related aspects, including Brazing and refrigerant safe handling.

Certification

CITB/BRA Commercial Brazing Standards

Example of contents

- Introduction to refrigeration and air conditioning
- Understanding of environmental impact of F gas
- Basic refrigeration cycle
- Various tools and pipe connecting techniques
- RAC installation practice
- Pressure testing
- Evacuation
- Refrigerant charging
- Leak testing
- Equipment record keeping requirements

F Gas (category 1) City & Guilds 2079, including an introduction to refrigerant pipe work installation practices

Reference: **C-DUK-5.5**

Duration: **5.5 days**

Attendees: **6-10 Engineers**

Who is it for

Heating engineers who have previously successfully completed the C-DUK-09-3 Refrigeration and Air conditioning Introductory course, now wishing to further expand their knowledge with the opportunity to obtain C&G 2079 certification.

Certification

City & Guilds 2079 &
CITB/BRA Commercial Brazing Standards

Example of contents

- Basic thermodynamics
- Identifying condition and state of refrigerant
- Pressure enthalpy chart
- RAC installation practice
- Complete brazed test piece to be fitted to refrigeration plant
- Pressure testing
- RAC maintenance and fault finding
- Refrigerant recycle and recovery



For advice and booking procedures, please contact your local participating college...

City of Bath College

Contact: Sue Wedekind and Diane Whittock

Tel: 01225 328 648 or 01225 328 610

Fax: 01225 328 797

Email: wedekinds@citybathcoll.ac.uk or whittockd@citybathcoll.ac.uk

Web: www.citybathcoll.ac.uk

College of North West London

Contact: Feraline Whyte

Tel: 0208 208 5275 (Mon, Tues, Wed) 0208 208 5117 (Thurs, Fri)

Fax: 0208 208 5279

Email: feraline.whyte@cnwl.ac.uk

Web: www.cnwl.ac.uk

Dudley College

Contact: Victoria Greaves

Tel: 01384 363714

Fax: 01384 363914

Email: victoria.greaves@dudleycol.ac.uk

Web: www.dudleycol.ac.uk

For more information or to apply for one of the listed City & Guilds or CITB/BRA college courses, **please contact your local college directly.**



Training Department

Daikin Airconditioning UK Limited

1 River Court, Albert Drive, Woking, Surrey GU21 5RP

Tel 0845 64 19 260 Fax 0845 64 19 075

www.daikin.co.uk



Visit www.eca.gov.uk/etl and type 'Daikin' in the quick search box for details of the latest ECA qualifying Daikin units



Daikin UK is approved by LRQA for its Quality Management System in accordance with the ISO9001 standard. ISO9001 pertains to quality assurance regarding design, development, manufacturing as well as to services related to the product.



Daikin units comply with the European regulations that guarantee the safety of the product.



ISO14001 assures an effective environmental management system in order to help protect human health and the environment from the potential impact of our activities, products and services and to assist in maintaining and improving the quality of the environment.



Daikin Europe N.V. participates in the Eurovent Certification Programme for Air Conditioners (AC), Liquid Chilling Packages (LCP) and Fan Coil Units (FC); the certified data of certified models are listed in the Eurovent Directory. Multi units are Eurovent certified for combinations up to 2 indoor units. VRV products, Rooftops, FWB-J and FWD-units are not within the scope of the Eurovent Certification Programme.

The present catalogue is drawn up by way of information only and does not constitute an offer binding upon Daikin UK. Daikin UK has compiled the content of this catalogue to the best of its knowledge. No express or implied warranty is given for the completeness, accuracy, reliability or fitness for particular purpose of its content and the products and services presented therein. Specifications are subject to change without prior notice. Daikin UK explicitly rejects any liability for any direct or indirect damage, in the broadest sense, arising from or related to the use and/or interpretation of this catalogue. All content is copyrighted by Daikin UK.